Observations of the Elongations and Conjunctions of the Satellites of Saturn.

Aperture $9\frac{1}{3}$ inches; power 240.

October 6, 1884.—Much cloud often; bad definition.
Enceladus, S.; $13^h\ 10^m$, not on line; $13^h\ 40^m$, near; $13^h\ 50^m$, on line? $14^h\ 0^m$, past.
Rhea, N.; $13^h\ 0^m$, just on line? clouded.

October 7 1884.—*Tethys*, E.; $15^h\ 0^m$, not up; $15^h\ 5^m$, up? $15^h\ 7^m$, up? $15^h\ 10^m$, past.
Dione, S.; $19^h\ 30^m$, not up; $19^h\ 40^m$, not up? $19^h\ 50^m$, on line; $20^h\ 0^m$, past.

October 14, 1884.—*Rhea*, elongation E.; good definition; $10^h\ 45^m$, G.M.T., not up; $10^h\ 50^m$, nearly up; $10^h\ 55^m$, on the web; $11^h\ 0^m$, past? $11^h\ 5^m$, certainly past.

October 19, 1884.—*Dione*, E.; definition bad; $11^h\ 30^m$, not up; $11^h\ 35^m$, nearly on line? probably on it; $11^h\ 40^m$, certainly past.

October 20, 1884.—*Enceladus*, E.; bad definition; $15^h\ 50^m$, near the web; $15^h\ 54^m$, probably on the web; $15^h\ 58^m$, past? $15^h\ 59^m$, certainly past.

October 28, 1884.—Elongation E. of *Tethys*; $9^h\ 15^m$, not up; $9^h\ 20^m$, near; $9^h\ 25^m$, on line? $9^h\ 30^m$, past? $9^h\ 35$, past.

November 5, 1884.—*Tethys*, N.; bad sky; wind and cloud; $9^h\ 50^m \pm$.

November 7, 1884.—*Enceladus*, conjunction S.; bad sky; clouds; $11^h\ 0^m$, not up; $11^h\ 5^m$, on line? $11^h\ 10^m$, past?

November 11, 1884.—Good definition.
Enceladus, elongation E.; $13^h\ 45^m$, not up; $13^h\ 50^m$, up? $13^h\ 50^m$, on line; $14^h\ 0^m$, past? $14^h\ 5^m$, past.
Mimas, W.; glimpsed now and then; on line, $13^h\ 50^m \pm$.
Rhea, conjunction N.; $15^h\ 40^m$, not up; $15^h\ 45^m$, on line; $15^h\ 50^m$, certainly past.

November 19, 1884.—Good definition; *Tethys* easy; *Rhea* rather difficult.
Tethys, conjunction S.; 13^h, not up, but near; $13^h\ 15^m$, up? $13^h\ 25^m$, up; $13^h\ 30^m$ past.
Rhea, elongation E.; $13^h\ 30^m$, $13^h\ 40^m$, not up; $13^h\ 50^m$, up? $14^h\ 0^m$, up? $14^h\ 10^m$, past.

November 20, 1884.—Bad definition, but plenty of light.
Tethys, N.; $11^h\ 45^m$, $11^h\ 55^m$, not up; $12^h\ 0^m$, up? $12^h\ 5^m$, up? $12^h\ 10^m$ past; $12^h\ 15^m$, past.
Dione, S.; $14^h\ 5^m$, $14^h\ 10^m$, not up; $14^h\ 15^m$, up? $14^h\ 20^m$, up? $14^h\ 25^m$ past.
Rhea, N.; $16^h\ 10^m$, $16^h\ 15^m$, not up; $16^h\ 17^m$, up? $16^h\ 20^m$, up? $16^h\ 24^m$ on line; $16^h\ 30^m$, past. *Enceladus* not seen.

November 22, 1884.—Much cloud at times.
Tethys, N.; $9^h\ 10^m$, not up; $9^h\ 15^m$, near; $9^h\ 17^m$, very near; $9^h\ 19^m$ to $9^h\ 25^m$, up? $9^h\ 30^m$, past? $9^h\ 33^m$, past.
Enceladus, E.; $12^h\ 30^m$, just visible; not up; $12^h\ 40^m$. very near; $12^h\ 42^m$, very near; $12^h\ 45^m$, on line? $12^h\ 50^m$, on line? $13^h\ 0^m$, past? $13^h\ 5^m$ past; well seen at $13^h\ 30^m$. *Mimas* invisible.

November 23, 1884.—$8^h\ 10^m$, two satellites seen at times; one a little past S. conjunction at $8^h\ 10^m$.

November 24, 1844.—Much cloud; *Dione*, N., $16^h\ 47^m \pm$.

November 25, 1884.—*Enceladus*, N.; on web, $13^h\ 49^m$; past $13^h\ 51^m$.

November 26, 1884.—*Mimas* not seen.
Enceladus, E.; very difficult; $15^h\ 34^m$, not up; $15^h\ 40^m$, past.
Dione, E.; $18^h\ 45^m$, not up; $18^h\ 50^m$, on web? clouds passing.

November 27, 1884.—*Dione*, N.; $10^h\ 15^m$, not up; $10^h\ 20^m$, not up; $10^h\ 35^m$, on line? $10^h\ 40^m$, on line? $10^h\ 45^m$, past.
Rhea, S.; $10^h\ 35^m$, $10^h\ 45^m$, not up; $10^h\ 48^m$, up; $10^h\ 49^m$, up; $10^h\ 50^m$ to $11^h\ 0^m$, up; $11^h\ 5^m$, past.

November 28, 1884.—*Enceladus*, N.; $7^h\ 25^m$, not quite up; $7^h\ 30^m$, up? $7^h\ 35^m$, past?

November 29, 1884.—*Rhea*, E.; $11^h\ 0^m$, $11^h\ 10^m$, not up; $11^h\ 20^m$, $11^h\ 25^m$, on line? $11^h\ 30^m$, past? $11^h\ 35^m$, past.
Dione, E.; $12^h\ 15^m$, $12^h\ 20^m$, not up; $12^h\ 25^m$, up? $12^h\ 30^m$, past? $12^h\ 35^m$, past.
Rhea, N.; $16^h\ 50^m$, not up; $16^h\ 55^m$, up; $17^h\ 0^m$, up? $17^h\ 10^m$, past.

December 6, 1884.—*Rhea*, S.; $11^h\ 15^m$, not up; $11^h\ 20^m$, not up; $11^h\ 25^m$, up? yes; $11^h\ 28^m$, past.

December 9, 1884.—*Enceladus*, N.; $6^h\ 20^m$, not up; $6^h\ 40^m$, past; very difficult.
Tethys, N; $8^h\ 45^m$, near; $8^h\ 50^m$, up; $8^h\ 50^m$, past? $8^h\ 55^m$, past.

December 15, 1884.—*Enceladus*, S; on line, $10^h\ 15^m$?
Rhea, N.; $11^h\ 50^m$, not up ? $11^h\ 55^m$, not up ? $12^h\ 0^m$, up ?
$12^h\ 10^m$, up ? $12^h\ 15^m$, past ? $12^h\ 20^m$, past.

Method of Observation.—Usually the horizontal section of the eye was placed parallel to the longer diameter of the rings, and a judgment formed as to when the satellite was at its elongation E. or W., or on an imaginary line passing through the centre of the ball from N. to S. Occasionally the web of the micrometer was used to aid the estimation, and when definition was very good, the straight edge of a diaphragm between the lenses of the eyepiece was sometimes used.